Amendments to the Claims:

1. (currently amended) A power allocation and user assignment method for multimedia broadcast multicast services (MBMS services) in a mobile communication system, the power allocation and user assignment method comprising the steps of:

transmitting a pilot signal to a plurality of user equipments;

receiving requests for MBMS services from a first portion of the plurality of user equipments, the requests including signals indicating a strength of the pilot signal at each of the first portion of the plurality of user equipments;

sorting each of the first portion of the plurality of user equipments by a the signals indicating the strength of the pilot signal thereat;

determining a number (K) of a particular user ~~equipment~~ equipments of the first portion of the plurality of user equipments to support on a broadcast channel; and

assigning a second portion of the plurality of user equipments, which are the particular user equipments one through K of the first portion of the plurality of user equipments, to the broadcast channel, wherein the second portion of the plurality of user equipments is smaller than the first portion of the plurality of user equipments.

2. (canceled)

3. (currently amended) The power allocation and user assignment method as claimed in claim 1, wherein ~~there is further included~~ the step of receiving requests includes a step of ~~collecting by a radio network controller (RNC) of the mobile communication system~~ receiving a signal/noise ratio value (S/N value) of the pilot signal as received by each of the first portion of the plurality

of user equipments.

4. (currently amended) The power allocation and user assignment method as claimed in claim 3, wherein there is further included a step of determining an area coverage threshold ~~corresponding to the number K of~~ in accordance with the ~~particular~~ second portion of the plurality of user ~~equipment~~ equipments based upon location and channel conditions of the ~~particular~~ second portion of the plurality of user ~~equipment~~ equipments within a cell of the mobile communication system.

5. (canceled)

6. (currently amended) The power allocation and user assignment method as claimed in claim ~~5~~ 4, wherein the step of sorting includes the step of sorting ~~by the RNC~~ each of the first portion of the plurality of user equipments by ~~the strength of~~ the S/N value of the pilot signal from a strongest pilot signal to a weakest pilot signal.

7. (currently amended) A power allocation and user assignment method for multimedia broadcast multicast services (MBMS services) in a mobile communication system, the power allocation and user assignment method comprising the steps of:

transmitting a pilot signal to a plurality of user equipments;

collecting by a radio network controller (RNC) of the mobile communication system a signal/noise ratio (S/N) of the pilot signal as received by the plurality of user equipments;

sorting by the RNC the plurality of user equipments by the strength of the S/N of the pilot signal

from a strongest pilot signal to a weakest pilot signal;

determining a number (K) of a particular user equipment of the plurality of user equipments to support on a broadcast channel;

determining by the RNC a coverage area within the cell for the MBMS services; and

assigning a portion of the plurality of user equipments, one through K, to the broadcast channel~~The power allocation and user assignment method as claimed in claim 6~~, wherein the step of determining a the number K includes a step of:

$$K = \arg\max_{k} \left(P_B(N_{UE}) - P_B(k) - \left(\sum_{i=k+1}^{N_{UE}} P_i \right) \right)$$

~~where~~ wherein $P_B(k)$ is the required power allocation of the broadcast channel to support user k, $P_B(N_{UE})$is the total power allocation required to cover all users using the broadcast channel and P_i is the required power to support user i using a dedicated channel.

8. (currently amended) The power allocation and user assignment method as claimed in claim 6, wherein there is further included a step of assigning ~~by the RNC~~ each of the second portion of the plurality of user equipments ranked 1 through K by the ~~strength of the pilot signal~~ S/N value beginning with the strongest pilot signal, to the broadcast channel.

9. (currently amended) The power allocation and user assignment method as claimed in claim ~~8~~ 1, wherein there is further included steps of:

determining ~~by the RNC whether a total number~~ which of the first portion of the plurality of user equipments requesting MBMS ~~service is greater than K~~ are included in the second portion

of the plurality of user equipments; and

~~if the total number is greater than K,~~ assigning ~~by the RNC~~ user equipments K+1 through the total number of the first portion of the plurality of user equipments to dedicated channels.

10. (currently amended) The power allocation and user assignment method as claimed in claim 9, wherein there is further included a step of setting ~~by the RNC~~ a new area coverage threshold ~~corresponding to~~ in accordance with all of the S/N values of the pilot signal of the ~~number K~~ second portion of the ~~particular~~ plurality of user ~~equipment~~ equipments.

11. (currently amended) The power allocation and user assignment method as claimed in claim 10, wherein there is further included a step of maintaining a power of the broadcast channel for the new area coverage threshold which is less than a maximum power allocated to the broadcast channel for MBMS services ~~by a network operator~~.

12. (currently amended) The power allocation and user assignment method as claimed in claim 11, wherein the step of maintaining the power of the broadcast channel ~~further~~ includes a step of determining an available power by

$$P_{B,AVAIL} = P_{B,MAX} - \left(\sum_{i=K+1}^{N_{UE}} P_i \right) - P_B(K)$$

~~where~~ wherein $P_{B,MAX}$ is the maximum power that may be assigned to the MBMS broadcast channel, P_i is the required power to support user i using a dedicated channel, N_{UE} is the total number of user equipments (UEs) requesting MBMS services, K+1 is the identity of the UE with the S/N which is unable to be supported on the broadcast channel, and $P_B(k)$ is the required power of the broadcast channel to support user k. ~~(normally assigned by the operator)~~. ~~This~~

~~maximum is usually the power required to cover the entire cell with a certain area coverage reliability.~~

13. (currently amended) The power allocation and user assignment method as claimed in claim 11, wherein there is further included a step of transmitting the new area coverage threshold to the second portion of the plurality of user equipments.

14. (currently amended) The power allocation and user assignment method as claimed in claim ~~2~~ 1, wherein the steps of transmitting, receiving, sorting, determining a number and assigning are performed prior to providing MBMS services ~~by the RNC~~.

15. (canceled)

16. (canceled).

17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (currently amended) A power allocation and user assignment method for multimedia broadcast multicast services (MBMS) on a broadcast channel and a dedicated channel in a mobile communication system, the power allocation method comprising the steps of:

during an MBMS broadcast, receiving a request from one user equipment of a plurality of user equipments for connection to a MBMS broadcast channel;

receiving a signal/noise ratio value of a pilot signal from the one user equipment;

determining a first power requirement required for the one user equipment on the dedicated channel;

determining a second power requirement required for the one user equipment on the MBMS broadcast channel;

determining whether the first power requirement is smaller than the second power requirement;

assigning the one user equipment to the dedicated channel or the MBMS broadcast channel in response to the signal/noise ratio value received, a first channel power of the dedicated channel, a second channel power of the MBMS broadcast channel and whether the first power requirement is smaller than the second power requirement;

increasing the second channel power of the MBMS broadcast channel to encompass a new area coverage threshold in response to the one user equipment being assigned to the MBMS broadcast channel and second channel power being available and the one user equipment being outside an area coverage threshold for the MBMS broadcast channel for the one user equipment, wherein the second channel power is increased according to

$P_B(K) = P_B(K) + P_{\Delta B}(i)$

wherein $P_B(K)$ is the second channel power of the MBMS broadcast channel to support users K and $P_{\Delta B}(i)$ is the additional power requirement of the MBMS broadcast channel to support user i; and

~~The power allocation and user assignment method as claimed in claim 22, wherein there is further included steps of:~~

~~assigning by the RNC the one user equipment to the MBMS broadcast channel; and~~

broadcasting the new area coverage threshold for the MBMS broadcast channel to the plurality of user equipments.

24. (canceled)

25. (canceled)

26. (canceled)

27. (currently amended) A power allocation and user assignment method for multimedia broadcast multicast services (MBMS services) in a mobile communication system between one user equipment of a plurality of user equipments and a radio network controller (RNC), the power allocation method comprising in the one user equipment the steps of:

requesting ~~by the one user equipment~~ coupling to the MBMS services;

~~transmitting~~ receiving a pilot signal ~~to the one user equipment~~;

measuring ~~by the one user equipment~~ a signal/noise (S/N) value of the pilot signal as received

by the one user equipment;

receiving ~~by the one user equipment~~ a signal/noise (S/N) value of a coverage threshold for the MBMS services; and

~~comparing by the one user equipment~~ determining whether the S/N value of the pilot signal measured by the one user equipment ~~with~~ is less than the S/N value of the coverage threshold.

28. (currently amended) The power allocation and user assignment method as claimed in claim 27, wherein there is further included the steps of:

determining ~~by the one user equipment~~ whether a timer is expired; and

if the timer is expired, performing the steps of requesting, ~~transmitting~~ receiving, measuring, receiving and ~~comparing~~ determining.

29. (currently amended) The power allocation and user assignment method as claimed in claim 28, wherein ~~if the timer is expired,~~ there is further included a step of resetting the timer in response to determining that the timer has expired.

30. (currently amended) The power allocation method as claimed in claim 28, wherein ~~if the timer is expired and if the S/N measured by the one user equipment is less than the S/N of the coverage threshold~~ there is further included a step of transmitting the measured S/N value of the pilot signal to the RNC in response to determining that the timer has expired and determining that the measured S/N value is less than the received S/N value of the coverage threshold.

31. (currently amended) ~~The~~ A power allocation and user assignment method ~~as claimed in~~

~~claim 27~~ for multimedia broadcast multicast services (MBMS services) in a mobile communication system between a plurality of user equipments and a radio network controller (RNC), the power allocation method comprising the steps of:

receiving a request from one of the plurality of user equipments to couple to the MBMS services;

transmitting a pilot signal to the one of the plurality of user equipments;

transmitting a signal/noise (S/N) value of a coverage threshold for the MBMS services;

receiving a S/N value of the pilot signal as measured by the one of the plurality of user equipments; and

~~, wherein there is further included a step of~~ assigning the one of the plurality of user ~~equipment~~ equipments to a broadcast channel or a dedicated channel ~~if~~ in response to the S/N value of the pilot signal ~~corresponding to~~ as measured by the one of the plurality of user ~~equipment~~ equipments ~~is within a first group of the plurality of user equipments~~.

32. (currently amended) The power allocation and user assignment method as claimed in claim 31, wherein the step of assigning includes the steps of: ~~there is further included a step of~~

assigning the one of the plurality of user equipments to a broadcast channel if the measured S/N value indicates that the one of the plurality of user equipments is in a first group of the plurality of user equipments; and

assigning the one of the plurality of user ~~equipment~~ equipments to a dedicated channel ~~of~~ if the measured S/N value indicates that the one of the plurality of user ~~equipment~~ equipments is in a second group of the plurality of user equipments.

33. (currently amended) The power allocation and user assignment method as claimed in claim 32, wherein if the one of the plurality of user ~~equipment~~ equipments is requesting MBMS services in progress, there is further included a step of assigning the one of the plurality of user ~~equipment~~ equipments to the broadcast channel if ~~the~~ incremental power required for the broadcast channel is less than ~~the~~ power required for a dedicated channel.

34. (currently amended) The power allocation and user assignment method as claimed in claim ~~33~~ 32, wherein if the one of the plurality of user ~~equipment~~ equipments is requesting MBMS ~~service~~ services in progress, there is further included a step of assigning the one of the plurality of user ~~equipment~~ equipments to the dedicated channel~~,~~ if the power required for a dedicated channel is less than ~~the~~ incremental power required for the broadcast channel.

35. (new) A power allocation and user assignment method for multimedia broadcast multicast services (MBMS services) in a mobile communication system, the power allocation and user assignment method comprising the steps of:

transmitting a pilot signal to a plurality of user equipments;

sorting each of the plurality of user equipments by a strength of the pilot signal;

determining a number (K) of a particular user equipment of the plurality of user equipments to support on a broadcast channel; and

assigning a portion of the plurality of user equipments, one through K, to the broadcast channel,

wherein the step of determining a the number K includes a step of:

$$K = \arg\max_{k}\left(P_B(N_{UE}) - P_B(k) - \left(\sum_{i=k+1}^{N_{UE}} P_i \right) \right)$$

wherein $P_B(k)$ is the required power allocation of the broadcast channel to support user k, $P_B(N_{UE})$is the total power allocation required to cover all users using the broadcast channel and P_i is the required power to support user i using a dedicated channel.